# IEEE P802.15 Wireless Personal Area Networks

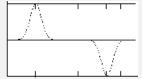
Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)
Title	Task Group 4z meeting minutes for November 2018
Date Submitted	16-Nov-18
Source	[Benjamin Rolfe] E-mail: [ben.rolfe @ ieee.org ] [Blind Creek Associates] [Benjamin A. Rolfe] [BCA]
Re:	Meeting minutes
Abstract	Task Group minutes
Purpose	Document task group meeting
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# IEEE Project 802 Working Group 15, Task Group 4z Meeting Minutes: November 2018 802 Plenary Bangkok, Thailand

Task Group Chair: Tim Harrington (Pro-ID Consulting, UWB Alliance)

Task Group Recording Secretary, Vice Chair: Benjamin A. Rolfe (Blind Creek Associates, UWB Alliance<sup>1</sup>)

# Task Group 4z



# **Enhanced Impulse Radio**

<sup>&</sup>lt;sup>1</sup> See <a href="http://www.blindcreek.com/pages/affiliations.pdf">http://www.blindcreek.com/pages/affiliations.pdf</a> for affiliations by 802 activity

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# Monday, November 12 2018 (AM1)

# Called to Order

TG4z is called to order at 08:10 Local Time. Chair and Recording secretary are present.

# Opening Report and Meeting Preamble

Chair presents Meeting preamble slides, document # 15-18-0532-00. https://mentor.ieee.org/802.15/dcn/18/15-18-0532-00-004z-opening-slides.pptx

# IEEE Patent and Meeting Conduct Presentation

Chair presents the IEEE patent policy information.

Chair directs attendees to review the meeting preamble slides via the link on the 802.15 home page: <a href="http://standards.ieee.org/board/pat/pat-slideset.ppt">http://standards.ieee.org/board/pat/pat-slideset.ppt</a>. Chair presents slides 1-5. Attendees are informed that:

- The IEEE's patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
- Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
- There may be Essential Patent Claims of which the IEEE is not aware. Additionally, neither the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

The foregoing information was provided; the chair provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard: **No responses were heard.** 

# Agenda

Agenda: Review and approved the agenda Document 15-18-0513-01.

https://mentor.ieee.org/802.15/dcn/18/15-18-0513-01-004z-tg4z-agenda-nov-2018.xlsx

After discussion, agenda modified and captured in 15-18-0513-02.

Motion to approve agenda document 15-18-0513-02:

Moved by: Frank Leong (NXP); Second: Jochen Hammerschmidt. (Apple)

Approved by unanimous consent.

#### **Prior minutes**

Approval of May meeting minutes, document 15-18-443-00.

https://mentor.ieee.org/802.15/dcn/18/15-18-0443-01-004z-task-group-4z-minutes-sept.pdf

Moved by: Billy Verso (Decawave), Second Ben Rolfe (BCA/UWBA).

Following neither discussion nor objection, approved by unanimous consent.

# Presentations and Discussion

#### Discussion: 6 GHz NPRM

Tim provides status and overview on 6 GHz Notice of Proposed Rule Making (NPRM) in the USA. Provides update on 802.18 progress and plan, notes the TG4z meeting times avoid overlap with 802.18 meeting schedule this week.

802.18 held an ad-hoc meeting on Sunday to work towards a 'common 802' contribution which represents the facts upon which 802 wireless WGs can agree.

Summary of NPRM related activities: The activity can be divided into two related activities:

- 1. NPRM Incremental approach in 802.18: first submission is what 802 can agree to:
  - a. Hi level catalog of related 802 wireless standards projects
  - b. Indicate 802 is working on coexistence analysis
  - c. Some debate still on if we tell FCC that we're working on coexistence solutions
  - d. Identify opportunities for positive rule changes
- 2. Coexistence: done well the coexistence analysis will support the NPRM process (outside of 802.18 scope):

- a. Analysis: characterize the potential coexistence situation supported by empirical and simulation data. Tell a believable, supportable story.
- b. Realistic mitigation strategies.

It is noted that interest in (2) varies greatly between different members within 802.

Tim presents the 802.18 draft document # 18-18-0139-00, the draft of the suggested hi-level 802 submission to the NPRM. Notes draft is a starting point, an 802.18 is looking to TG4z to provide the 802.15 input. Notes and suggested changes added as notes in the DOC and sent to 802.18 chair.

#### Recess

Recess @ 0010:07 local.

# Monday, November 12 2018 (PM1)

Called to order @ 13:40 Local time. Chair and recording secretary are present. Meeting reminder given (review scope and conduct).

# Presentations and Discussion

# **Editing Status Report**

Billy Verso (Decawave) reports to the TG.

- 1. Held several teleconference calls
- 2. Well along integrating LRP contributions
  - a. doc 15-18-260-00 and 15-18-432-01 near complete
  - b. Started integrating doc 15-18-409-00
- 3. HRP
  - a. Working with collaborators to converge on contribution

# **HRP Progress Report**

Frank Leong (NXP) reports to the TG.

Consensus on PHY layer details largely completed. Beginning work on MAC enhancements. Presents Doc # 15-18-543-00 Summary of requirements for MAC enhancements to support secure ranging with HRP.

https://mentor.ieee.org/802.15/dcn/18/15-18-0543-00-004z-mac-considerations.pptx

# MAC presentation

Ayman Naguib, Doc # 15-18-0540-00

https://mentor.ieee.org/802.15/dcn/18/15-18-0540-00-004z-mac-for-secure-ranging.pptx MAC Considerations.

# Short Recess and Resumption

Chair calls a 15 minute recess @ 15:00 local. Called back to order at 15:15 local time

#### Discussion: 6 GHz NPRM

Having completed the agenda items for PM1, and upon agreement of the group, continue discussion of the input to 802.18 NPRM response (document # 18-18-0139-00).

#### Recess

Recess @ 15:50 local time.

# Tuesday, November 13 2018 (AM1)

Called to order 08:09 local. Chair and recording secretary are present. Meeting reminder given (review scope and conduct).

#### Presentations and Discussion

# Sequential Ranging Control Information Element

Document #15-18-0549-01, Seongah Jeong (Samsung) <a href="https://mentor.ieee.org/802.15/dcn/18/15-18-0549-01-004z-sequential-ranging-control-information-element.pptx">https://mentor.ieee.org/802.15/dcn/18/15-18-0549-01-004z-sequential-ranging-control-information-element.pptx</a>

# Inclusion of Multicast/Broadcast Ranging in Information Element

Doc # 15-18-0550-01, Seongah Jeong (Samsung)

 $\underline{https://mentor.ieee.org/802.15/dcn/18/15-18-0550-01-004z-inclusion-of-multicast-broadcast-ranging-in-information-element.pptx}$ 

# Inclusion of Ranging FoM in Information Element

Doc # 15-18-0551-01, Seongah Jeong (Samsung)

 $\frac{https://mentor.ieee.org/802.15/dcn/18/15-18-0551-01-004z-inclusion-of-ranging-fom-in-information-element.pptx}{}$ 

#### MAC General Discussion

Agreement that establishing time for MAC works is good; Priority is to complete resolving PHY issues first. Will work here if time permits and work on teleconferences between meetings.

#### Ad Hoc Discussions

Suggested to recess to enable ad hoc discussions on HRP PHY.

#### Recess

Recess @ 09:17 local.

# Tuesday, November 13 2018 (PM1)

Meeting called to order: 13:40. Chair and recording secretary are present. Meeting reminder given (review scope and conduct).

# Presentations and Discussion

#### Draft Text for Inclusion of UWB Secure Service Information Element

Document #15-18-0561-01, Aditya V Padaki (Samsung Research America) <a href="https://mentor.ieee.org/802.15/dcn/18/15-18-0561-01-004z-draft-text-for-inclusion-of-uwb-secure-service-information-element.docx">https://mentor.ieee.org/802.15/dcn/18/15-18-0561-01-004z-draft-text-for-inclusion-of-uwb-secure-service-information-element.docx</a>

# Update of UWB Radio Regulation in Japan

Document 15-18-0546-00, Ryuji Kohno (YNU/CWC-Nippon) <a href="https://mentor.ieee.org/802.15/dcn/18/15-18-0546-02-0dep-update-of-uwb-radio-regulation-in-japan.pdf">https://mentor.ieee.org/802.15/dcn/18/15-18-0546-02-0dep-update-of-uwb-radio-regulation-in-japan.pdf</a>

#### Recess

Recess @ 12:30 local.

# Wednesday, November 14 2018 (PM1)

Called to order at 13:40 local time. Chair and recording secretary are present. Meeting reminder given (review scope and conduct).

#### Presentations and Discussion

# HRP UWB PHY enhanced mode converged consensus

Document 15-18-0590-00. Presented by Billy Verso, Frank Leong, Jochen Hammerschmidt. <a href="https://mentor.ieee.org/802.15/dcn/18/15-18-0590-00-004z-hrp-uwb-phy-enhanced-mode-converged-consensus.pptx">https://mentor.ieee.org/802.15/dcn/18/15-18-0590-00-004z-hrp-uwb-phy-enhanced-mode-converged-consensus.pptx</a>

Following discussion on the presentation, a motion is offered:

Motion to approve document 15-18-0590-00 for inclusion into the baseline.

Moved by Billy Verso, Second by Frank Leong.

Following neither discussion nor objection motion carries by unanimous consent.

#### Frame format and modes revision for LRP UWB PHY

Document 15-18-0589-00, presented by David Barras (3dB).

 $\frac{https://mentor.ieee.org/802.15/dcn/18/15-18-0589-00-004z-frame-format-and-modes-revision-for-lrp-uwb-phy.pptx}{}$ 

Discussion:

Following discussion on the presentation, a motion is offered:

Motion to accept the additional technical content of document 15-18-0589-00 into the baseline Moved by: David Barras, Second: Ben Rolfe

Following neither discussion nor objection motion carries by unanimous consent.

#### **MAC Discussion**

Propose begin work on MAC text tomorrow AM2. It is noted that the MAC contributions are largely aligned in principle, work is needed to complete details.

#### Reminder

Chair reminds the group of the 802.18 meeting AM1 Thursday.

Recess at 14:55 for 20 minute recess.

Called to order at 15:15.

# NPRM input to 802.18

Work on proposed edits to 18-18-0139-04.

#### Recess

Recess @ 15:48

# Thursday, November 14 2018 (AM2)

Called to order at 10:35. Chair and recording secretary present. Meeting reminder given.

# Presentations and Discussion

#### 802.18 NPRM Initial Comment

Tim reviews background and state of the submission as completed this morning in the 802.18 meeting. Document 18-18-0139-07.

https://mentor.ieee.org/802.18/dcn/18/18-18-0139-07-0000-fcc-18-295-ieee-802-comment.docx

#### **MAC** discussion

Billy Verso presents document #15-18-0599-00.

Draft text covering two way ranging mechanisms, procedures and messages

https://mentor.ieee.org/802.15/dcn/18/15-18-0599-00-004z-draft-text-covering-two-way-ranging-mechanisms-procedures-and-messages.docx

This can server as a start of a contribution with all MAC text changes. Includes updates and corrections to the overview of ranging clause, adaptation of IEs defined in 802.15.8 to 802.15.4z, and updates to the MAC service primitives and PIB. MAC contributors to work with technical editor (Billy) to complete.

# Teleconference Schedule

Every 2 weeks at 6:00 AM PDT; first 2 on Dec 4th and 18th.

# Recess

Recess @ 12:25 local

# Thursday, September 14 2018 (PM1)

Called to order at 13:40. Chair and recording secretary present. Meeting reminder given.

Discussion on the draft development and WG balloting process.

Discussion on developing Coexistence analysis for the CAD. Volunteers needed. None so far.

NOTE: Cannot start working group balloting of draft until we have a CAD.

# Next steps

Review process and schedule. Target is draft to letter ballot following January meeting.

# **Working Group Motions:**

No WG motions required.

#### **AOB**

None heard.

# Adjourn

Motion to adjourn

Moved by Jochen Hammerschmidt, second by Billy Verso.

Non debatable, no objections heard.

Adjourned @ 17:15.

# **Other References**

# Final output of 802.18 on the 6GHz NPRM

https://mentor.ieee.org/802.18/dcn/18/18-18-0139-06-0000-fcc-18-295-ieee-802-comment.docx



Figure 1: Safe Travels Everyone